



6450-01-P

DEPARTMENT OF ENERGY

[EERE-2018-BT-DET-0014]

Preliminary Analysis Regarding Energy Efficiency Improvements in the 2018 International Energy Conservation Code (IECC)

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Notice of availability.

SUMMARY: The U.S. Department of Energy (DOE) is announcing the availability of a Preliminary Energy Savings Analysis of the 2018 International Energy Conservation Code (Preliminary Analysis). DOE welcomes written comments from interested parties on any subject within the scope of this Preliminary Analysis.

DATES: DOE will accept written comments and information on the Preliminary Analysis no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: A copy of the Preliminary Analysis is available at

<https://www.energycodes.gov/development/determinations>.

Any comments submitted must provide docket number EERE-2018-BT-DET-0014.

Comments may be submitted using any of the following methods:

1. *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.
2. *Email:* 2018IECC2018DET0014@ee.doe.gov. Include the docket number in the subject line of the message.

3. *Postal Mail:* Building Energy Codes Program, U.S. Department of Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue SW, EE-5B, Washington, DC 20585-0121. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

4. *Hand Delivery/Courier:* Building Energy Codes Program, U.S. Department of Energy, Building Technologies Office, 950 L'Enfant Plaza SW, EE-5B, Suite 600, Washington, DC 20024.

If possible, please submit all items on a CD, in which case it is not necessary to include printed copies. For detailed instructions on submitting comments, see section II of this document (Public Participation).

Public Docket: The docket, which includes *Federal Register* notices, comments, and other supporting documents/ materials, is available for review at

<http://www.regulations.gov>. All documents in the docket are listed in the

<http://www.regulations.gov> index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available. A link to the docket on the Regulations.gov site can be found at:

<http://www.regulations.gov/#/docketDetail;D=EERE-2018-BT-DET-0014>. The

Regulations.gov Web page will contain instructions on how to access all documents, including public comments, in the docket. See section II for further information on how to submit comments through *Regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Jeremiah Williams; U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, 1000 Independence

Avenue SW, EE-5B, Washington, DC 20585; (202) 441-1288;

Jeremiah.Williams@ee.doe.gov.

For legal issues, please contact Kavita Vaidyanathan; U.S. Department of Energy, Office of the General Counsel, 1000 Independence Avenue SW, GC-33, Washington, DC 20585; (202) 586-0669; *Kavita.Vaidyanathan@hq.doe.gov*.

SUPPLEMENTARY INFORMATION:

I. Background

II. Public Participation

I. Background

Title III of the Energy Conservation and Production Act, as amended (ECPA), establishes requirements for building energy conservation standards, administered by the DOE Building Energy Codes Program. (42 U.S.C. 6831 et seq.) Section 304(a)(5)(A), as amended, of ECPA provides that whenever the CABO Model Energy Code, or any successor to that code, is revised, the Secretary of Energy (Secretary) must make a determination, not later than 12 months after such revision, whether the revised code would improve energy efficiency in residential buildings, and must publish notice of such determination in the *Federal Register*. (42 U.S.C. 6833(a)(5)(A)) The International Energy Conservation Code (IECC) is the contemporary successor to the CABO Model Energy Code specified in ECPA.

The 2018 IECC (2018 edition), the most recent edition, was published in August 2017, triggering the statutorily-required DOE review process. The IECC is developed through an industry consensus process administered by the International Code Council (ICC). The ICC has an established program for regular review of the IECC, identifying whether proposed changes have energy and cost impacts, and incorporating changes

approved by the ICC governmental voting body. Updated editions of the IECC are typically published every three years. More information on the ICC code development process is available at: <https://www.iccsafe.org/codes-tech-support/codes/code-development-process/code-development-2/>.

II. Discussion of Findings

To meet the statutory requirement, DOE conducted a Preliminary Energy Savings Analysis of the 2018 International Energy Conservation Code (Preliminary Analysis) to quantify the expected energy savings associated with the 2018 IECC. The Preliminary Analysis indicates, of the 47 proposed code changes which directly impact energy use, 11 changes resulted in a *reduction* of energy use, with 3 changes projected to *increase* energy use. The remaining 33 changes are projected to have no or limited effect on energy usage.

Preliminary Energy and Cost Savings Analysis

DOE's Preliminary review and analysis of the 2018 IECC identified two key changes which result in the bulk of the energy savings associated with the updated code:

- RE31 (Fenestration): Lowers (improves) fenestration U-factors in climate zones 3-8
- RE127 (Lighting): Increases high-efficacy lighting from 75% to 90% of permanently installed fixtures in all homes.

These changes are expected to have a significant and measurable impact on energy efficiency in residential buildings. These changes are expected to increase energy savings, impact a significant fraction of new homes, and can be reasonably quantified through the established methodology.

Together, the key impacts identified above are expected to result in life-cycle cost savings ranging from a low of \$398 in climate zone 1 to a high of \$1071 in climate zone 8. Expected payback ranges from 0.0 years (immediate payback) in climate zones 1 and 2 to 1.8 years in climate zone 3. National average savings are \$480 with a payback of 1.1 years.

More information on these two changes and their expected energy savings impacts are presented in a separate technical analysis, *Preliminary Energy Savings Analysis: 2018 IECC Residential Requirements*¹.

Preliminary Determination of Impacts on Energy Efficiency

Review of the 2018 IECC indicates the updated model code will increase energy efficiency in residential buildings. Residential buildings meeting the 2018 IECC (compared to the previous 2015 IECC edition) are expected to incur the following savings on a weighted national average basis:

- 1.68 percent of annual *site energy*;
- 1.91 percent of annual *source energy*, and;
- 1.97 percent of annual *energy costs*.

The full Preliminary Analysis, including an assessment of the expected energy and cost impacts, is available via the DOE Building Energy Codes Program:

<https://www.energycodes.gov/development/determinations>.

Request for comment on IECC Changes

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https://www.energycodes.gov/sites/default/files/documents/2018_IECC_PreliminaryDetermination_TSD.pdf

DOE welcomes written comments from interested parties on these technical documents and cost saving analysis.

III. Public Participation

DOE will accept comments, data, and information regarding the Preliminary Analysis no later than the date provided in the **DATES** section at the beginning of this notice. Interested parties may submit comments, data, and other information using any of the methods described in the **ADDRESSES** section at the beginning of this notice.

Submitting Comments via the Regulations.gov Website

The Regulations.gov web page will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies Office staff only. Your contact information will not be publicly viewable, except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment itself or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Do not submit to <http://www.regulations.gov> information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (CBI)). Comments submitted through <http://www.regulations.gov> cannot be

claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section below.

DOE processes submissions made through *Regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *Regulations.gov* provides after you have successfully uploaded your comment.

Submitting Comments via Email, Hand Delivery/Courier, or Mail

Comments and documents submitted via email, hand delivery, or mail also will be posted to *Regulations.gov*. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter, including your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via mail or hand delivery/courier, please provide all items on a CD, if feasible. It is not necessary to submit printed copies. No facsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, that are written in English, and that are free of any defects or viruses. Documents should not contain special characters or

any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign Form Letters

Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information

According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery/courier two well-marked copies: one copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked non-confidential with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include: (1) a description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) when such information might lose its

confidential character due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

Signed in Washington, DC, on April 25, 2019.

David Nemptow,
Acting Deputy Assistant Secretary for Energy
Efficiency,
Energy Efficiency and Renewable Energy.

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